



A.D. 1875, 24th Jan. N° 2307.

SPECIFICATION

OF

THADDEUS HYATT.

—
FOR THE PREPARING AND PRESERVING SUBSTANCES
FOR DIETARY AND MEDICINAL USES.
—

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A.D. 1875, 24th JUNE. N° 2307.

Preparing and Preserving Substances for Dietary and Medicinal Uses.

LETTERS PATENT to Thaddeus Hyatt, of No. 66, Gloucester Gardens, Hyde Park, London, in the County of Middlesex, Manufacturer of Patent Lights, for the Invention of “IMPROVEMENTS IN THE TREATMENT, PREPARATION, AND PRESERVATION OF SUBSTANCES OR BODIES FOR DIETARY AND MEDICINAL USES AND SANITARY PURPOSES (PARTLY APPLICABLE IN THE ARTS), AND IN THE PROCESSES AND MACHINERY OR APPARATUS FOR EFFECTING THE SAME.”

Sealed the 21st August 1875, and dated the 24th June 1875.

PROVISIONAL SPECIFICATION left by the said Thaddeus Hyatt at the Office of the Commissioners of Patents, with his Petition, on the 24th June 1875.

I, THADDEUS HYATT, of No. 66, Gloucester Gardens, Hyde Park, London, in the County of Middlesex, Manufacturer of Patent Lights, do hereby declare the nature of the said Invention for “IMPROVEMENTS IN THE TREATMENT, PREPARATION, AND PRESERVATION OF SUBSTANCES OR BODIES FOR DIETARY AND MEDICINAL USES AND SANITARY PURPOSES (PARTLY APPLICABLE IN

Hyatt's Impts. in Preparing, &c. Substances for Dietary Uses, &c.

THE ARTS), AND IN THE PROCESSES AND MACHINERY OR APPARATUS FOR EFFECTING THE SAME," to be as follows :—

My Invention has reference to impregnating and aromatizing bodies or substances; to drying or dessicating them (browning, burning, roasting, and incinerating being included under the terms "drying or dessicating"); to pulverizing or comminuting the same; to collecting or separating comminuted materials from the air when floating therein; and to the compression of comminuted materials collected and prepared by the methods herein described. 5

Impregnating and Aromatizing.—According to this part of my Invention my improvement consists in obtaining medicinal and aromatic qualities in forms and under conditions that better fit them for use as medicines and food than as generally employed, that is to say, in place of the mineral in its natural state I employ it in soluble form dissolved in water; this mineralized water I then apply to the roots of some growing plant, wheat for instance, and thus vitalize it, making iron wheat. In this form the iron is no longer mineral but vegetable, and as such digestible when converted into flour and made into bread. Other soluble minerals may be applied in the same way. 15

According to another part of my Invention my improvement consists in employing the aromas of medicinal substances separated from their natural bodies and incorporated with a food base. Selecting camphor in illustration of this method, I place it in a vessel preferably deprived of air, with any suitable dry absorbent of food character, such for example as dried bread or biscuit reduced to dust, or starch, sugar, or analogous material, and keep the two together until the food has become sufficiently impregnated. Camphor parts with its aroma readily, but some substances require the application of heat during the process. 20 25

Drying or Dessicating.—According to another part of my Invention my improvement consists in dessicating bodies through the agency of heat and an absorbent which draws the moisture or juices from while transmitting heat to the substance or body embedded in it. In carrying this method into practice I arrange the absorbent material upon a brick or other floor similar to an oven floor, or in some cases upon the floor of an oven, the absorbent for some purposes being clean sand, earth, or ashes, and in this I bury or enclose the substance or body to be dried or dessicated, the heat being applied either in the ordinary manner of 30 35

Hyatt's Impts. in Preparing, &c. Substances for Dietary Uses, &c.

heating ovens or otherwise. In this way any degree of heat may be transmitted in a slow, regular, and graduated manner to bodies to simply dry them, or cook them, or convert them to "dust and ashes." In illustration of this method I dry, for example, a vegetable like green
5 beans, or a fruit like cherries, by burying them in clean sand, as described, subjected to heat. The same with fish and flesh, a porous or other covering being sometimes used to prevent contact with the sand. Coffee roasted by this method may be intermingled, if desired, with the sand, as it may afterwards be readily screened away. A part of my
10 improvement in this process consists in surrounding the substance or body which is to be cooked with a food absorbent placed next to or in contact with it to imbibe its aroma; for example, in roasting coffee I sometimes mix it with sweetened bran, which absorbs the aroma of the coffee during the roasting process, and becomes itself converted into
15 "caramel" at the same time. Where the process is used on sanitary grounds, as in disposing of the dead, I prefer to first wrap the body in an asbestos cloth, or otherwise isolate it, in order to make the collection of the dust certain, and of easy accomplishment. The absorbent earth I prefer in some cases to treat chemically with carbolic acid or other dis-
20 infectant, the layer immediately around the body being preferably charcoal. A part of the process, where the work is the incineration of the dead, consists in subsequently consolidating the ashes into suitable memorial shapes, forms, and tokens, such as a medallion likeness, bust, or statuette of the deceased.

25 Pulverizing or Comminuting Substances or Bodies.—According to this part of my Invention my improvement consists in pulverizing or comminuting food and drink, making, as well as medicinal substances, to an impalpable powder or dust for the purpose of increasing their power; for example, as now treated, flour is eaten in the form of biscuit and
30 bread, but according to my improvement these are first reduced to an impalpable powder or nearly so, and collected by the process herein-after explained as a digestible food for children, invalids, and others, the powder being in some cases compressed into wafers or other convenient form for use, carriage, and transportation. Bran, so essential for the
35 growth of bones in children, may by this process be rendered palatable, whereas now it is very difficult to persuade children to eat it. Charcoal and kindred substances by this method are also made into forms of greater use.

Hyatt's Impts. in Preparing, &c. Substances for Dietary Uses, &c.

Collecting or Separating Comminuted Matters from the Air.—The common method of collecting floating dust from the air, as practised in pencil making and other manufactories, is by gravity, a process both tedious and costly; but according to my Invention my improvement consists in using a vaccuum chamber for this purpose, that is to say, on 5 the principle that “a feather in a vaccuum falls with the same velocity as a guinea,” I withdraw the air from the chamber where the dust is floating, when it at once falls in a mass. This cheap and instantaneous method of collecting dust renders possible the manufacture of dust food, a thing never hitherto attempted, although food materials of various 10 degrees of fineness exist.

In the manufacture of dust food I proceed upon the assumption that all materials, whether food or medicines, manifest their potency in proportion to the number of particles into which they are reduced and presented to the organs of digestion, a principle which homeopathy 15 seems to have demonstrated. In carrying out this part of my Invention, as an illustration of the method, I grind or otherwise pulverize tea, coffee, cocoa, or other substance until sufficiently fine to float in the air, allowing the coarse particles to fall into a drawer at the bottom of the chamber, which may be removed. I then by means of an air pump or 20 otherwise withdraw the air, when the dust at once falls in a mass, which may be collected and packed as dust, or be reduced to cakes or tablets by compression.

Compression of Comminuted Materials.—In this part of my Invention I make use of any of the well known means of consolidating materials 25 by pressure, my improvement consisting merely in compressing into suitable and convenient forms, substances, or bodies which have been reduced to dust by the means, methods, and processes herein set forth.

SPECIFICATION in pursuance of the conditions of the Letters Patent,
filed by the said Thaddeus Hyatt in the Great Seal Patent Office 30
on the 24th December 1875.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, THADDEUS
HYATT, of No. 66, Gloucester Gardens, Hyde Park, London, in the
County of Middlesex, Manufacturer of Patent Lights, send greeting.

Hyatt's Impts. in Preparing, &c. Substances for Dietary Uses, &c.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-fourth day of June, in the year of our Lord One thousand eight hundred and seventy-five, in the thirty-ninth year of Her reign, did, for Herself, Her heirs and successors,
5 give and grant unto me, the said Thaddeus Hyatt, Her special license that I, the said Thaddeus Hyatt, my executors, administrators, and assigns, or such others as I, the said Thaddeus Hyatt, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during
10 the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for
“IMPROVEMENTS IN THE TREATMENT, PREPARATION, AND PRESERVATION OF SUBSTANCES OR BODIES FOR DIETARY AND MEDICINAL USES AND SANITARY PURPOSES
15 (PARTLY APPLICABLE IN THE ARTS), AND IN THE PROCESSES AND MACHINERY OR APPARATUS FOR EFFECTING THE SAME,” upon the condition (amongst others) that I, the said Thaddeus Hyatt, my executors or administrators, by an instrument in writing under my or their hands and seals, should particularly describe and ascertain the nature of the said Invention, and
20 in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Thaddeus Hyatt, do hereby declare the nature of the said Invention, and in what manner the same is to
25 be performed, to be particularly described and ascertained in and by the following statement thereof, reference being had to the accompanying Drawings and to the letters and figures marked thereon, that is to say :—

My Invention has reference to impregnating and aromatizing bodies
30 or substances; to drying or desiccating them; (browning, “burning,” roasting, and incinerating, being included under the terms “drying or desiccating”); to pulverizing or comminuting the same; to collecting or separating comminuted materials from the air when floating therein; and to the compression of comminuted materials collected and prepared
35 by the methods herein described.

Impregnating and Aromatizing.—According to this part of my Invention my improvement consists in obtaining medicinal and aromatic

Hyatt's Impts. in Preparing, &c. Substances for Dietary Uses, &c.

qualities in forms and under conditions that better fit them for use as medicines and food than as generally employed, for example, minerals when used medicinally are commonly administered in their natural or inorganic state; but according to my improvement I first bring the mineral (iron for instance) into a soluble condition, say a salt of iron; 5 this salt I dissolve in water and apply or feed to the roots of a growing plant fit to be eaten as food. A mineral thus absorbed into the tissues of a plant becomes digestible or food, because vitalized with the life of the plant of which it forms a part.

According to another part of my Invention my improvement consists 10 in a method of dry impregnation. In this process I make use of an aromatizing vessel A, Figure 1, in which I place the medicinal substance B (camphor for example) with the absorbent food C, which may be dried rusk or biscuit, or dried bread reduced to powder or dust, sugar, or other nutritious food. In some cases, as in that of camphor for 15 example, the medicinal substance will be bodily absorbed, the whole of it disappearing, in others the aroma or essence only or soul of the medicine will be absorbed. In some cases I find it advantageous to conduct the operation in vacuo by pumping out or otherwise withdrawing the air; and in some cases I find it useful to employ heat. 20

Desiccating.—According to another part of my Invention, my improvement consists in a method of desiccating substances or bodies for use as food, or with reference to their preservation; in the case of human bodies, the preservation being a sanitary measure, the method consisting in placing the substance or body to be acted on in a heated absorbent 25 earth or other absorbing material, and keeping it therein subjected to heat until dry, and in some cases until reduced to powder or dust. In carrying this part of my Invention into effect I find it convenient to make use of a drying chamber A, Figure 2, in the upper part of which *a, a*, upon the bottom portion thereof or table *b, b*, I place the substance 30 or body B to be dried upon a layer or bed *c, c*, of absorbent material adapted to the nature of the substance or body to be dried out. In the case of vegetables, fruits, flesh, and fish, I prefer in some cases to employ an absorbent fit to be afterwards used for food, such for example as baked or dried flour, bread, or similar substance, the absorbent when 35 so employed catching and retaining the flavor or quality of the dried out material. When roasting coffee by this process I sometimes mix it with clean sand, the heat being gradually raised to the roasting point,

Hyatt's Impts. in Preparing, &c. Substances for Dietary Uses, &c.

the sand being afterwards screened out; but I prefer in general to roast it in a food absorbent, such for example as dried sweetened bran, the coffee of preference being first partially dried out, the bran under these circumstances becoming caramelized while imbibing the flavor of the
5 roasting coffee; B, Fig. 2, represents the coffee, and *c, c*, the absorbent. In the desiccation of human bodies B, Fig. 2, represents such body; *c, c*, represents baked or dried earth; this earth being in some cases impregnated with disinfectants or mixed with charcoal. The body may be kept from mingling its dust with the earth by wrapping it in an
10 asbestos sheet, or in wire cloth, or in thin perforated metal, or otherwise. The heat which is admitted into the lower part *d, d*, of the desiccating chamber A through a pipe *e, e*, Fig. 2, communicates with a furnace C, passing upwards through perforations in the table *b, b*, into and through the absorbent layer *c, c*, the moisture or juices of the body B in this way
15 being gradually withdrawn. In some cases I prefer to additionally employ an air pump D to facilitate the drying process, which is effected by drawing off any escaped gases or vapours through a pipe *f, f*. Bodies thus treated I propose to reduce either to the condition of mummies or to “dust and ashes,” and as one means of preserving this
20 dust I propose to consolidate it by pressure into medallion form, or into busts, or otherwise, in some cases fashioning the dust so as to represent the deceased as in life.

Pulverizing, Collecting, and Compressing Food and other Substances.
—According to this part of my Invention my improvement consists in
25 a dry method of preparing biscuit and other food, as opposed to the wet method of biscuit and bread making commonly employed, the flour by my method being cooked or baked in its dry state before being made up. All that is required by this plan for reducing the flour to form for marketable purposes is to compress it in suitable moulds into any
30 required shapes and sizes, a form of biscuit consisting in combining with such cooked flour the dried fish, flesh, vegetable, or fruit flour, herein-above mentioned, another form of biscuit made as aforesaid, consisting in mixing sugar with the flour before compression, and then caramelizing the same by heat. This form of farinaceous “sweet” I
35 also make by soaking ordinary bread or biscuit in sweetened water, then drying and caramelizing it by the heat of an oven or otherwise.

According to another part of my Invention I make biscuits of all kinds from flour prepared in the usual manner of making bread. This

Hyatt's Impts. in Preparing, &c. Substances for Dietary Uses, &c.

bread I then bring to the condition or similar to "dried rusk," which I then pulverize and reduce to the finest flour, and finally compress into biscuit or cakes, as already mentioned.

According to another part of my Invention my improvement consists in preparing tea and coffee as a marketable commodity for transporta- 5
tion, sale, and use, in the form of powder or dust compressed into tablets or otherwise, the Invention consisting in the reduction of the tea or coffee to an impalpable powder to develop its aroma and strength, and to also put it in a condition similar to powdered or "prepared cocoa," as to the method of its use, that is to say, to be consumed 10
bodily instead of in fusion.

According to another part of my Invention my improvement consists in preparing and obtaining food material in dust form by a process analogous to that employed for obtaining refined plumbago for pencil making, a part of the Invention consisting in a new method of col- 15
lecting the floating particles from the air, and which process applies to materials other than food, as plumbago itself for example. This process I term the vacuum process. A, Figure 3, represents a vessel or chamber of any convenient size and form; B, an air pump connected with A by the pipe C, which is attached to the under side of the porous bottom D. 20
This bottom may be made of plaster of Paris, or other material that will intercept the floating particles *a, b, c*, while permitting the air to be withdrawn through it. When the air pump is set in motion the particles *a, a, a*, will begin to fall, the heaviest descending in a less complete vacuum than the finest, which fall last. Figure 4 represents the first 25
effects of withdrawing the air, the heaviest particles *a, a, a*, having fallen; a slide E is then drawn over the descended particles and the air pump again set in motion, when the next heaviest particles *b, b, b*, descend, as seen in Figure 5. Another slide being drawn over these the process is continued until all have fallen, and the different grades 30
or qualities of material secured. These varying grades of dust may be put up in powder form or compressed, as above-mentioned, into tablets, pastiles, or otherwise. In some cases I prefer to attach the pipe C of the air pump B to the top of the chamber A, the porous diaphragm D being then fixed at the top instead of at the bottom of the chamber A. 35
A part of my Invention consists in preparing cocoa according to the process herein above described, and compressing it in its dry and dust

Hyatt's Impts. in Preparing, &c. Substances for Dietary Uses, &c.

form into cakes, tablets, pastiles, and other forms, using sugar in dust form to combine with it when making sweetened cocoa.

Having now described and particularly ascertained the nature of my said Invention, and the manner in which the same is or may be used or
5 carried into effect, I would observe in conclusion that what I consider to be novel and original and therefore claim as the Invention secured to me by the herein-before in part recited Letters Patent is, impregnating and aromatizing, drying or desiccating, pulverising or comminuting, collecting and compressing substances, materials or bodies, substantially
10 in the manner, and by the methods or processes, and for the uses and purposes herein described and set forth.

In witness whereof, I, the said Thaddeus Hyatt, have to this my Specification, set my hand and seal, this Twenty-fourth day of December, One thousand eight hundred and seventy-five.

15

THADDEUS HYATT. (L.S.)

LONDON:

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FIG. 1.

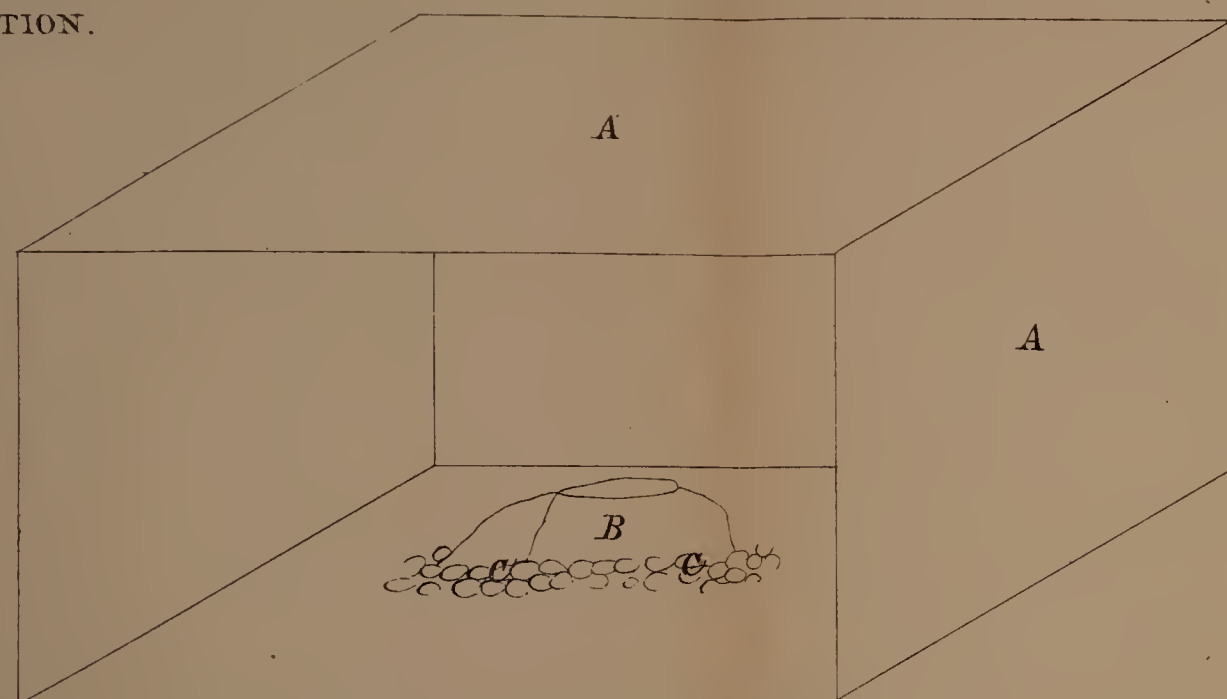


FIG. 2.

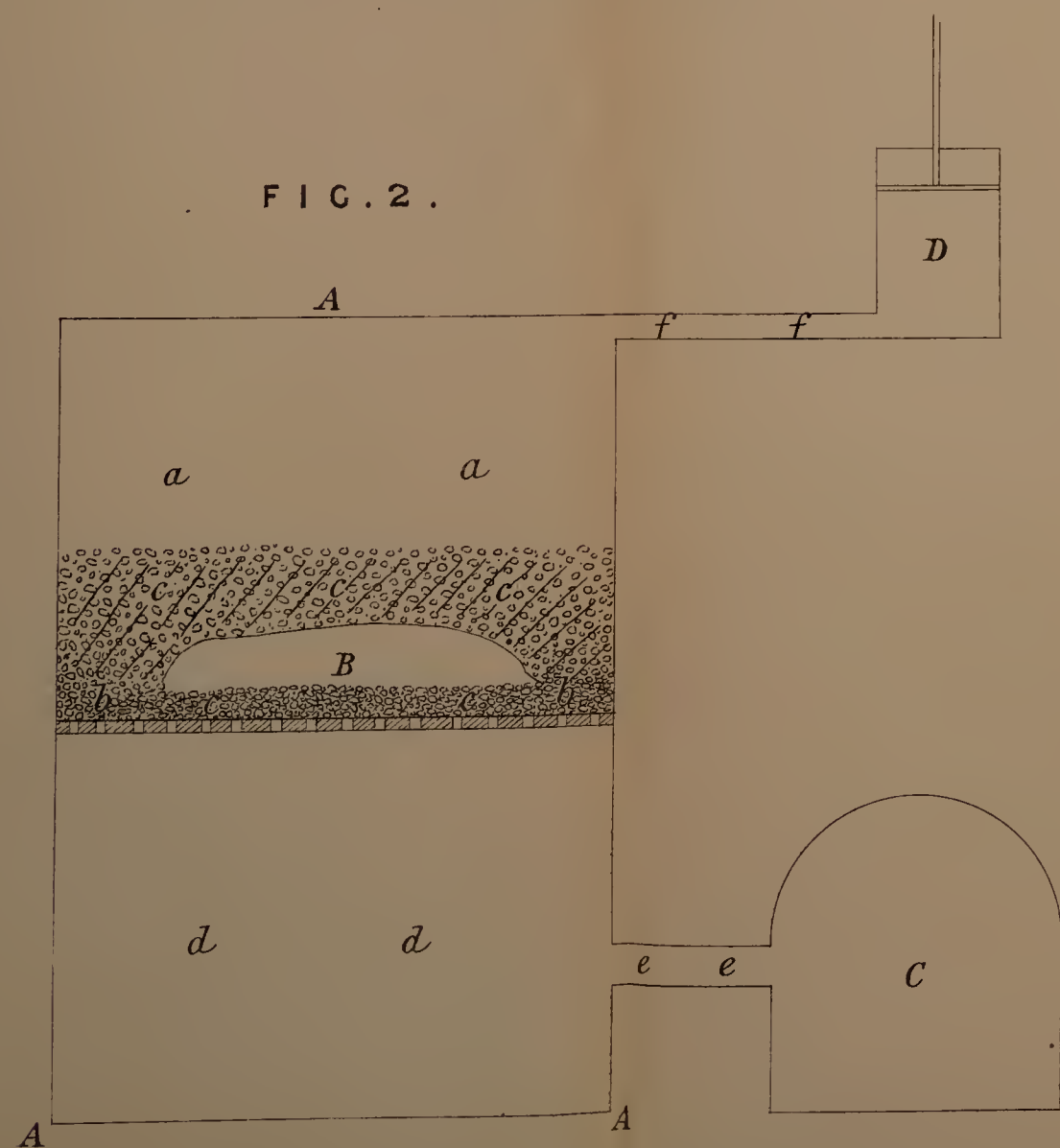


FIG. 3.



FIG. 4.

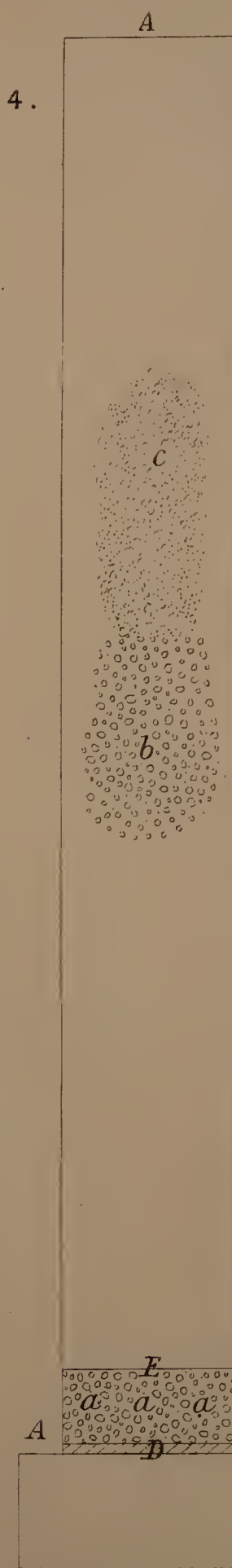
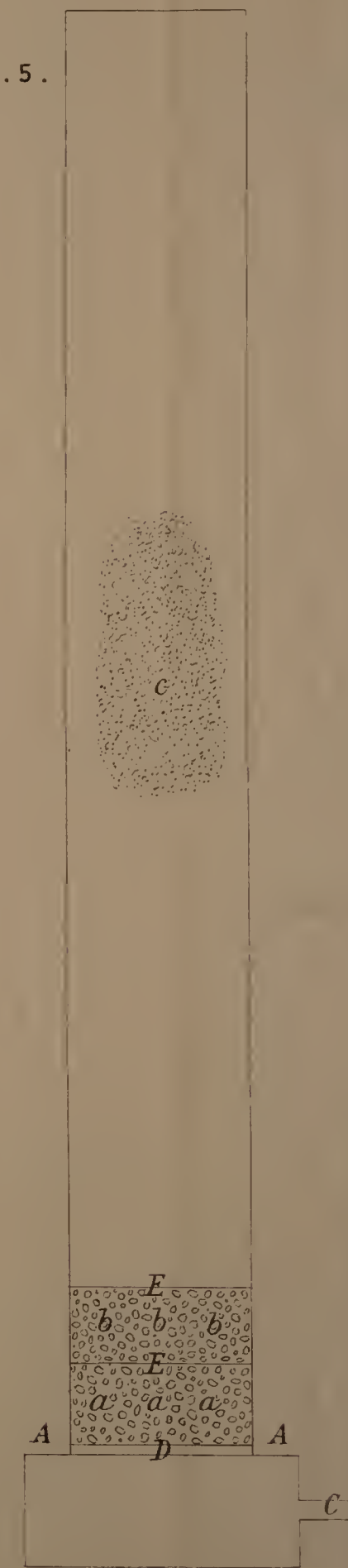


FIG. 5.



The filed drawing is not colored.

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